

THE GEOGRAPHIC LOCATION OF GORGONIDIUM (ARACEAE)

DAN H. NICOLSON¹

The type-species of the monotypic genus *Gorgonidium*, *G. mirabile* Schott, until just recently was believed to have been collected by Gaudichaud in the Papuan area, but has now been found to have been collected by d'Orbigny in Bolivia.

The type-material of *G. mirabile* (Schott, 1864) was cited as being from "Carari, Sualica (?)", the query reflecting Schott's uncertainty as to the locality. Schott credited the collection to Gaudichaud and cited the field description, "Arum à fleur violette." The type was stated to be at Leiden.

At Leiden, the holotype was found, with the following information which Schott had not reported. The specimen is labelled as being from "Herb. Gaudichaud" (which does not mean that it was collected by Gaudichaud). A collection number, 484, appears on the label that bears the field description.

Engler (1920), the last monographer of the *Araceae*, reported, without any explanation, that this "Gaudichaud" collection was from "Monsungebiet. — Papuasische Provinz: Insel Carari im Mare sualicum." There is a Cavili Island in the Sulu Sea, but that is between the Philippine Islands and Borneo, not in the Papuan area, and there is no evidence that Gaudichaud visited it. Members of several institutions (Leiden, Kew, British Museum) agreed that something was wrong with this locality.

The solution of the type-locality problem came when the present author noted that an isotype of *Spathanthem orbignyianum* Schott (1859) at Leiden had a field label saying "Arum alique verte de Cavari, Sicalica," in handwriting

¹This problem was investigated while the author held an intermediate graduate fellowship, No. 21024, from the U.S. National Science Foundation.

The author wishes to thank Drs. A. Lourteig (Paris), H. Sleumer (Leiden), R. Foster (Harvard) and W. Dress (Cornell) who contributed much of their personal time and enthusiasm to this problem.

identical with that on the field label of the *G. mirabile* holotype. The collector's name, d'Orbigny, which was the basis of the specific epithet, was not to be found on the specimen, although it, too, was noted as being from "Herb. Gaudichaud."

Dr. Alicia Lourteig, of the Paris Museum of Natural History, kindly investigated the "Gaudichaud" and d'Orbigny herbaria at Paris. She reported that there is not, and never has been, an officially recognized Gaudichaud herbarium, and that the materials so labelled at Leiden probably only record that they were received from Gaudichaud. However, the d'Orbigny herbarium, never before investigated for its isotypes of *Araceae*, produced isotypes of both *S. orbignyianum* (holotype at Geneva) and *G. mirabile* (holotype at Leiden) and yielded the following complete information from the original field labels, written in the hand of d'Orbigny.

G. mirabile — Cavari, Sicasica Prov., Bolivia — d'Orbigny 484 — Arum à fleur violette.

S. orbignyianum — Cavari, Sicasica Prov., Bolivia — d'Orbigny 485 — Arum à tige verte.

In the early days of the Rijksherbarium (Leiden) and in other herbaria, there was a good deal of label-copying and sometimes the original labels were discarded. For instance, the same handwriting on the field labels of the Leiden types of *G. mirabile* and *S. orbignyianum* may be seen on the holotype of *Xenophya branceaefolia* Schott, which was collected by Zippel in New Guinea. However, in the case of the latter, the original field labels are present.

The change from "Sicasica" to "Sualica" in handwriting can best be seen in two steps. First, changing it "ic" to "u" happens when the dot over the "i" is omitted and the top of the "c" is not rounded. Second, "sica" to "lica" is explicable in terms of the old-style internal "s" that looked more like an uncrossed "f". This internal "s" can easily be misread as an "l" in handwriting. A copying clerk, unfamiliar with the place-names, might easily have read "Sualica" (viz. *Gorgonidium*) or "Sicalica" (viz. *Spathanthemum*) where "Sicasica" was originally written.

It is probable that d'Orbigny gave some of his duplicates to Gaudichaud, who, in turn, gave them to Leiden. The original d'Orbigny field labels (Paris) do not bear the collector's name. In the absence of this, they were recorded at Leiden as being from "Herb. Gaudichaud". Both Scott and Engler, not knowing of the original duplicates at Paris, incorrectly interpreted this to mean that Gaudichaud had collected the holotype of *G. mirabile*.

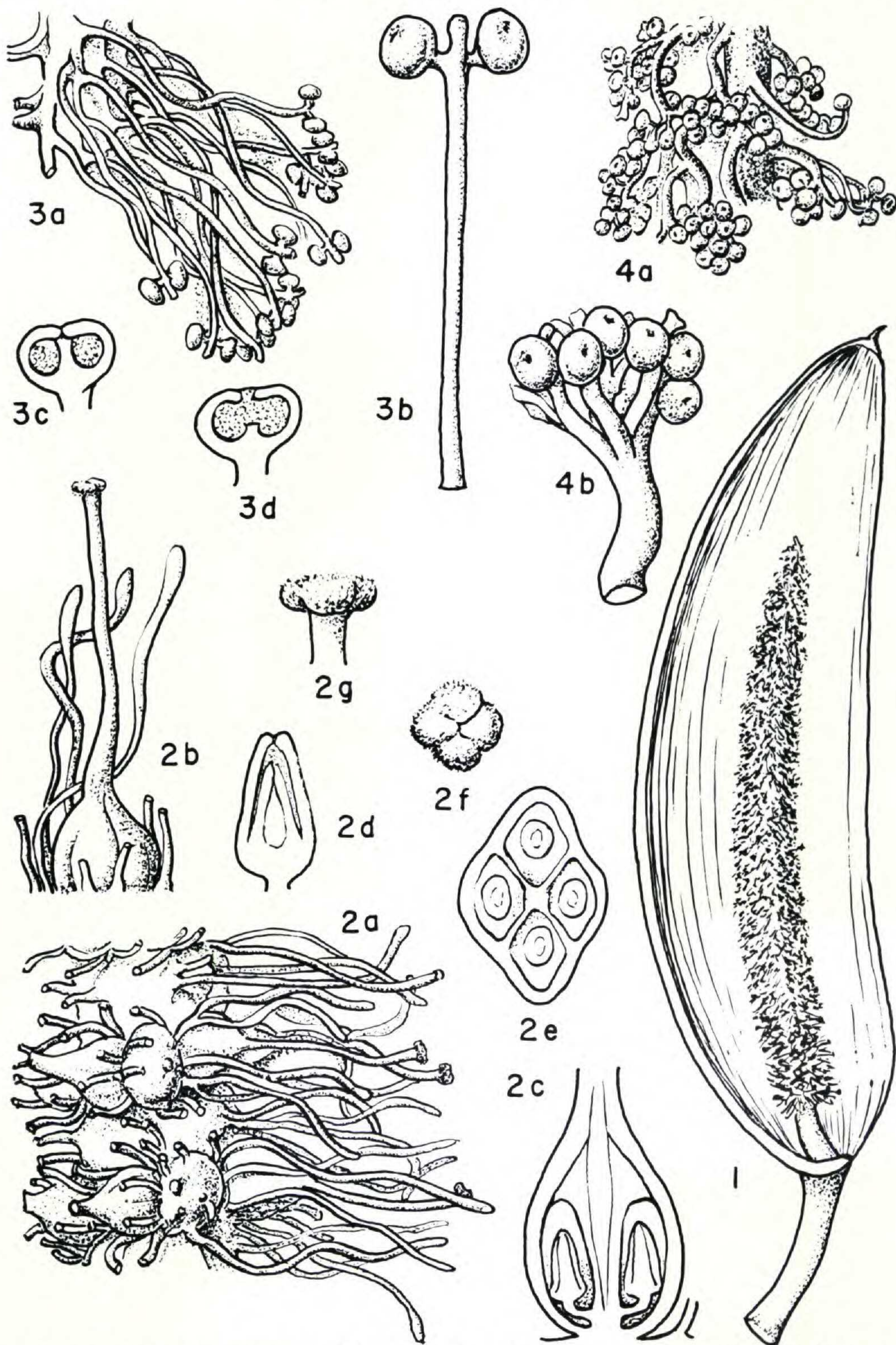
Schott (died 1865) had 3282 color and black and white drawings of *Araceae* prepared, for which he himself paid. This set of drawings (of which less than 200 have been published) is deposited at the Natural History Museum, Vienna. The unpublished folio drawing numbered "Icon. Herb. Palat. Vindob./Schott Aroideae Nr. 1990" was drawn by Nickelli from the Leiden holotype of *Gorgonidium mirabile*.

Engler (1920, Pl. 2, fig. F-H) illustrates a pistillate flower, a stamen, and a staminate flower. Figure F is copied from the Schottian drawing. Figures G and H are highly stylized, but were undoubtedly based on the Schottian drawing, rather than on the holotype.

The illustration published here includes fourteen figures which were copied by Miss Mitsu Nakayama from photographs of Schott's Nr. 1990, which contains twenty-seven figures. The author wishes to thank Prof. Dr. K. H. Rechinger, Director of the Natural History Museum in Vienna for permission to publish these figures.

The following description of *Gorgonidium mirabile* is synthesized from the original description (Schott, 1864), Engler's description (1920), and photographs (taken by the author) of the holotype at Leiden and the Schottian drawing Nr. 1990 at Vienna.

Leaf unknown. Peduncle incomplete. Spathe purple, about 20 cm. long and 5 cm. wide, open almost to the base. Spadix purple, approximately 14 cm. long; stipe 1.7 cm. long, pistillate portion 1.8 cm. long, and staminate portion 11.5 cm. long. Pistillate flowers more or less whorled, each surrounded by 6-8 irregularly arranged staminodia; ovary 4-locular, locules 1-ovular; ovule orthotropous; style filiform; stigma 4-lobed. Staminate flowers contiguous with the pistillate, with 6-8 stamens; lower flowers with free stamens, often irregularly ar-



Figs. 1-4b *Gorgonidium mirabile* Schott. 1. Inflorescence with one half of the spathe removed. 2. Details from lower (pistillate) portion of the inflorescence: 2a. Several pistillate flowers and their staminodia; 2b. Single pistillate flower and its staminodia; 2c. Longitudinal section of pistil; 2d. Longitudinal section of an ovule; 2e. Cross-

ranged; upper flowers with stamens more or less connate by their filaments; stamens with long filaments, much longer than the spheroidal anthers, these paired, stipitate below the free end of the connective, and dehiscent by a terminal pore.

SUMMARY

The type-specimen of the type-species of *Gorgonidium* Schott has hitherto been considered as having been collected by Gaudichaud in the Papuan area. In fact, however, it was collected by d'Orbigny in Bolivia. The error developed from the omission of d'Orbigny's name on the field labels, the distribution of duplicates by Gaudichaud, and a clerk's miscopying of "Sicasica" (a province of Bolivia) as "Sualica", which was thought to be a sea in the Papuan area. The solution was found by a study of previously unrecognized isotypes of *Spathanthemum orbignyanum* Schott and *Gorgonidium mirabile* Schott in the Paris Museum of Natural History. — L. H. BAILEY HORTORIUM, CORNELL UNIVERSITY.

LITERATURE CITED

- ENGLER, A. 1920. Das Pflanzenreich, IV, Fam. 23F: 52.
SCHOTT, H. W. 1859. *Spathanthemum orbignyanum* Schott in *Bonplandia* 7: 164-165.
———. 1864. *Gorgonidium mirabile* Schott in *Ann. Mus. Bot. Lugd.-Bat.* 1: 282.

section of the ovary; 2f. Top view of stigma; 2g. Side view of stigma. 3. Details from central (staminate) portion of inflorescence. 3a. Several staminate flowers; 3b. Single stamen; 3c. Longitudinal section of immature anther; 3d. Longitudinal section of anther at anthesis. 4. Details from upper (staminate) portion of inflorescence: 4a. Several staminate flowers; 4b. Single staminate flower.